

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3 (Cancelled).

4 (Currently Amended). A chimeric sIL-6R/IL-6 according to ~~claim 3~~ claim 38, wherein said linker is a tripeptide of the sequence Glu-Phe-Met, said chimeric polypeptide having the sequence of SEQ ID NO:7.

5 (Cancelled).

6 (Currently Amended). A chimeric sIL-6R/IL-6 according to claim 38, ~~being sIL-6R δ Val/IL-6 having a tripeptide wherein said linker of sequence Glu Phe Met between the C terminus of sIL-6R and the N terminus of IL-6, said ehimeric protein having the sequence of SEQ ID NO:7~~ has a length of 3-4 amino acids.

7 (Currently Amended). A chimeric sIL-6R/IL-6 according to claim 38, being the sIL-6R δ Val/L/IL-6 of SEQ ID NO:7 in which a 13 amino acid peptide linker of SEQ ID NO:1 is substituted for the Glu-Phe-Met of residues 357-359 of SEQ ID NO:7.

8 (Cancelled).

9 (Previously Amended). A chimeric sIL-6R/IL-6 according to claim 38, wherein said sIL-6R/IL-6 is produced in mammalian cells..

10 (Previously Amended). A chimeric sIL-6R/IL-6 protein according to claim 9, wherein said sIL-6R/IL-6 is produced in human cells.

11 (Previously Amended). A chimeric sIL-6R/IL-6 according to claim 9, wherein said sIL-6R/IL-6 is produced in CHO cells.

12-15 (Cancelled).

16 (Withdrawn). A DNA sequence encoding a chimeric sIL-6R/IL-6 according to claim 38.

17 (Withdrawn). A DNA vector comprising a DNA sequence encoding a chimeric sIL-6R/IL-6 according to claim 38, said vector being suitable for expression of said chimeric sIL-6R/IL-6 in mammalian cells.

18. (Withdrawn). A DNA vector according to claim 17, wherein said vector is suitable for expression of said chimeric protein in human cells.

19. (Withdrawn). A DNA vector according to claim 17, wherein said vector is suitable for expression of said chimeric protein in CHO cells.

20 (Withdrawn). A DNA vector according to claim 17, wherein when said vector is expressed in mammalian or human cells, the expressed chimeric sIL-6R/IL-6 has a sequence that permits full processing of the chimeric sIL-6R/IL-6 by the mammalian or human cells and secretion of the fully processed chimeric sIL-6R/IL-6 from the cells into the culture medium in which said cells are grown.

21 (Withdrawn). A DNA vector according to claim 17, wherein said vector is the herein designated plasmid pcDNAsIL-6R/IL-6 comprising a pcDNA3 vector containing the DNA sequence encoding the chimeric sIL-6/IL-6 protein under the control of a cytomegalovirus (CMV) promoter.

22 (Withdrawn). A DNA vector according to claim 17, wherein said vector is the plasmid pcDNA sIL-6R/L/IL-6 comprising a pcDNA3 vector containing the DNA sequence encoding the chimeric sIL-6R/IL-6 under the control of a cytomegalovirus (CMV) promoter, and wherein in said DNA sequence encoding said chimeric sIL-6R/IL-6 there is inserted a linker sequence encoding a peptide linker at the EcoRI site

placed between the sequences encoding the sIL-6R part and the sequence encoding the IL-6 part of the protein.

23 (Withdrawn). Transformed mammalian cells containing a DNA vector according to claim 17 which are capable of expressing the sIL-6R/IL-6 sequence carried by said vector and of fully processing the expressed sIL-6R/IL-6 and secreting it into the culture medium in which said cells are grown.

24 (Withdrawn). Transformed cells according to claim 23 wherein said cells are human embryonal kidney cells 293 (HEK293) transfected by the pcDNA sIL-6R/IL-6 vector, said cells being capable of expressing the sIL-6R/IL-6, fully processing said sIL-6R/IL-6 and secreting said sIL-6R/IL-6 into the culture medium in which said cells are grown in the form of an about 85 kDa glycoprotein.

25 (Withdrawn). A method for producing a chimeric sIL-6R/IL-6, comprising growing transformed cells according to claim 23 under conditions suitable for expression, processing and secretion of said sIL-6R/IL-6 into the culture medium in which said cells are grown; and purifying said sIL-6R/IL-6 from said culture medium.

26. (Withdrawn). A method according to claim 25, wherein the purification is carried out by immunoaffinity chromatography using monoclonal antibodies specific for sIL-6R.

27-32 (Cancelled).

33 (Previously Amended). A pharmaceutical composition comprising as active ingredient a chimeric sIL-6R/IL-6 according to claim 38, and a pharmaceutically acceptable carrier, diluent or excipient.

34-36 (Cancelled).

37 (Withdrawn). A method for treating cancers in mammals, or for enhancing bone marrow transplantations, or for treating liver or neurological disorders, or for increasing hematopoiesis, or for other applications in which IL-6 or sIL-6R are used, comprising administering to a patient a pharmaceutical composition according to claim 33 in a suitable dosage form and by a suitable route of administration.

38 (Currently Amended). A chimeric glycosylated soluble interleukin-6 receptor (sIL-6R)-interleukin-6 (IL-6) polypeptide (sIL-6R/IL-6), consisting of:

~~(a)~~—an amino acid sequence which is a fusion product of ~~the naturally occurring sequence of~~ sIL-6R₇δVal

~~including the Ig-like domain and the receptor pre-membrane region, fused to the naturally occurring sequence of IL-6, optionally including a non-immunogenic linker of 3-4 amino acids therebetween or including a peptide of 13 amino acid residues of sequence Glu-Phe-Gly-Ala-Gly-Leu-Val-Leu-Gly-Gly-Gln-Phe-Met (SEQ ID NO: 1) therebetween, which linker does not prevent the chimeric polypeptide from triggering dimerization of gp130 in human cells; or~~

~~_____ (b) an analog of (a) which differs from the sequence of (a) by no more than 30 changes in the amino acid sequence of (a), each such change being a substitution, deletion, addition or insertion of a single amino acid, which is capable of triggering the dimerization of gp130 in human cells.~~

39-44 (Cancelled).